



## Position Statement Ergot and ergot alkaloid control in barley

Ergot is a fungal disease (*Claviceps purpurea*) which can infect grain sites in cereals including barley and produce large black fruiting bodies (sclerotia) on ears. The sclerotia contain mycotoxins known as ergot alkaloids and these can have harmful effects in humans and animals.

Ergot alkaloid levels in grain are minimised in several ways by maltsters, who demonstrate 'due diligence' using a number of methods:

1. Grain is inspected closely at intake for malting, and any deliveries of barley showing evidence of ergot sclerotia, however small, are rejected. Cleaning equipment at farms and in grain stores are effective at removing many foreign bodies, including sclerotia, from grain. Some maltsters also operate equipment such as colour sorters which further eliminate any contaminating material from grain prior to steeping.
2. MAGB, in collaboration with malting companies and others (e.g. AHDB) operate comprehensive surveillance programmes for the presence of ergot alkaloids. Representative samples of barley covering all the UK are analysed for ergot alkaloids using extremely sensitive laboratory methods based on LC/MS/MS. This annual survey has been undertaken over many years and shows that barley used for malting does not contain alkaloid levels that are of a concern for food safety. Results of recent surveys can be found here [Monitoring of contaminants in UK cereals used for processing food and animal feed \(2016–21\) | AHDB](#)
3. In-house research by MAGB has shown that there is a progressive reduction in ergot alkaloid levels through processing from barley to malt and then to beer or whisky. This provides added reassurance that ergot alkaloids are removed during processing and are either absent or where present they are at extremely low levels in final products

### **Ergot regulations (at September 2021)**

The EU has recently introduced Commission Regulation (EU) 2021/1399 amending Regulation (EC) No 1881/2006 as regards maximum levels of ergot sclerotia and ergot alkaloids in certain foodstuffs: [EUR-Lex - 32021R1399 - EN - EUR-Lex \(europa.eu\)](#) This Regulation applies from 1 January 2022, but article 2 claims "Foodstuffs listed in the Annex lawfully placed on the market before 1 January 2022, may remain on the market until their date of minimum durability or use-by-date."

**This regulation does not apply to the UK and further consideration needs to be made by UK regulatory authorities as to whether it is likely to be adopted.**

Considering the EU regulation, it is important to note that the limits for ergot alkaloids only apply to 'milling products of barley' and barley 'placed on the market for the final consumer'. This does not apply to malt, including that which has been milled prior to delivery to brewing customers. The control point for these products is the limit of 0.2 µg/kg ergot sclerotia in the grain delivered to maltsters.